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## Biology of *Xylocopa (Xylocopa) violacea* (Linnè, 1758) (Hymenoptera: Apidae): a new nest substrate. II

**Abstract** – The aim of this note was to report for the first time a *Xylocopa violacea* (L.) (Apidae) nest in a *Sambucus nigra* L. (Caprifoliaceae) pole.

**Riassunto** – Biologia di *Xylocopa (Xylocopa) violacea* (Linnè, 1758) (Hymenoptera: Apidae): un nuovo substrato per il nido. Viene riportato per la prima volta il ritrovamento di un nido di *Xylocopa violacea* (L.) (Apidae) in un paletto derivato da *Sambucus nigra* L. (Caprifoliaceae).

**Key words:** *Xylocopa violacea*, new nest substrates, *Sambucus nigra*, Caprifoliaceae.

### Introduction

*Xylocopa* Latreille, 1802 (Apidae: Xylocopini) is subdivided into 47 subgenera nesting in a great numbers of artificial and natural vegetal substrate types (dead and rotten trunks, poles, woody tables, branches, cane-bamboo internodes, floral stalks, pithy stems). In these substrates, individuals dig tunnells by mandibles (Vicidomini, 1995, 1997a). As Hurd & Moure (1963) pointed out, the plasticity of *Xylocopa* nesting biology has sustained several speciation events and the enlargement of distribution area, too. Poles, woody tables and cane/bamboo are used by man for agricultural or building purposes and the same are used by *Xylocopa* species specially when they are partially or totally rotten. *Xylocopa* species are thus well adapted both to artificial substrates and to anthropic environments (agricultural- and town- lands). For *X. (Xylocopa) violacea* (Linnè, 1758), the most common european species of this tribe, have been recognized 28 substrate types used for nesting acitivity (Vicidomini, 1997b); the aim of this contribute is to report, for the first time, a *X. violacea* nest in *Sambucus nigra* L. (Angiospermae: Caprifoliaceae).

### Results & Discussion

The nest has been dug during the first week of May (1997), in an agricultural 1130 mm-pole derived from a cut branch of *Sambucus nigra* in the town of Nocera Inferiore (Salerno Province: Campania region: Southern Italy) at about 50 m a.s.l., in a small farmland placed on the bank of the Ca-

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vaiola river (Tab. 1). Branch has been cut from *S. nigra* trunk in 1993; the wood was well preserved in the external zone but the core was very soft (see Tab. 1). After the cut the pole was used for culture support (Tab. 1). The main features of pole and nest are reported in Table 1. These observations are totally in accordance with Vicidomini (1995) conclusions on *X. violacea* nest morphology in pole substrates of this research-area. The nest is unbranched, with an ascending chamber, a descending one and a vestibule of 38 mm (Tab. 1); the nest total length is 275 mm and the founder female has used the 24,3% of pole length. The present record increases the botanical substrate species used by *X. violacea* for nesting to 29 substrates and for the first time a species belonging to Caprifoliaceae family is reported as nest substrate used by *X. violacea*; other botanical families used by *X. violacea* are as follows: Agavaceae, 1 species; Apiaceae, 1; Betulaceae, 1; Fagaceae, 4; Juglandaceae, 1; Moraceae, 2; Pinaceae, 1; Poaceae, 1; Punicaceae, 1; Rosaceae, 8; Salicaceae, 5; Taxodiaceae, 1; Ulmaceae, 1 (see also: Vicidomini, 1997b). A geographic enlargement of *X. violacea* nesting biology study will increase, possibly, the knowledge about the botanical species (and families) used as nesting substrates.

Tabella 1 - Nest and pole characteristics

Substrate species	<i>Sambucus nigra</i> (branch cut in 1993)
Anthropic use	Culture support and alignments
Wood conditions	Surface: hard & compact; core: very soft
Pole: total length; circumference at nest entrance level	1130 mm; 131 mm
Pole diameter at nest entrance level	39 mm
Nest entrance-pole tip distance; -pole base distance	420 mm; 710 mm
Nest entrance: diameter; position; exposition	11 mm; Central; North
Nest entrance depth inside pole (= vestibule)	38 mm
Chamber length: ascending; descending	151 mm; 113 mm
Total nest length/pole length	0,243

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